Request for Economic Stimulus Funds
STEM Education – Advance Kentucky
Concept Proposal

Submitters: Kentucky Science and Technology Corporation

Project Title: AdvanceKentucky

Project Partners (Known or Anticipated): Kentucky Science & Technology Corporation, 27 public high schools, National Math & Science Initiative (NMSI) representing ExxonMobil, Dell and Gates Foundations; 15-25 new high schools to be added in round currently open; further scale-up is planned and expected by NMSI from each partner state.

Project Background & Purpose (Justification for Project): NMSI is an organized private sector response to the report "Rising Above the Gathering Storm" that called for national scale-up of proven programs to help remedy the nation's drastic decline in math and science education. AdvanceKentucky is one the first six AP Training and Incentive Programs in the country to help close the gap of achievement on rigorous STEM coursework among underrepresented minority and low income students. AdvanceKY is replicating the highly successful AP Strategies model in Texas. Proof of this success is demonstrated in the schools that have implemented this program for 12 years during which time: Math and Science scores increased 12-fold; English scores increased 6-fold; Minorities' passing scores increased in math, science, and English 23 fold. During the start-up year, 12 participating Kentucky high schools' math, science and English AP qualifying scores contributed 12 percent of the entire statewide growth in new AP qualifying scores in ALL subjects.

Project Description (General Goals & Implementation Strategies): AdvanceKentucky is a statewide math-science initiative dedicated to helping Kentucky's students reach new heights in rigorous STEM academic achievement. The program targets expanding participation and closing the achievement gaps among underrepresented student populations. In the first year, Cohort 1 increased the number of students in the program who are eligible for free or reduced lunch by 107% and minorities students by 81%.

Success is measured by growth in students' participation in AP courses both in terms of enrollments and Qualifying Scores (three and above on a five-point scale) in eligible AP courses, which typically are taken by juniors and seniors. Eligible AP STEM courses include: Calculus (AB, BC), Computer Science A, Statistics, Biology, Chemistry, Environmental Science, Physics (B, C: Electricity and Magnetism, C: Mechanics).

Interrelated elements of success comprise the NMSI Model that is premised on a philosophy of inclusiveness and high expectations for each student. The model expands access to, preparation

for and participation in academically rigorous coursework, i.e., the Advanced Placement (AP) Program. This includes extensive teacher training and Pre-AP preparation strategies for middle school and high school feeder courses.

Project Team (Project Manager(s), Content Experts, Instructional Designers, etc.):
Joanne Lang, Executive Director; Linda Griffin, Director of Educational Programs; Lew Acampora, Science Content Director (Master AP Teacher, College Board Consultant); Monique Morton, Math Content Director (Master AP Teacher, College Board Consultant); Tina Rose, English Content Director (Master AP Teacher); Gregg Fleisher, NMSI National AP Director; Rene McCormick, NMSI Director of Quality and Standards; NMSI National Content Specialists: Lin McMullin, Math; Carol Leibl, Science)

Project Budget & Amount of Economic Stimulus Funds Requested:
Under conditions of matching over the six years, NMSI has committed $13.2 million to AdvanceKentucky through funding from Exxon Mobil Corporation and the Dell and Gates Foundations. Matching funds are needed to contribute to a broader scale up of this program: $2.5 million is requested to support approximately 25 high schools' start-up and implementation of this program.